

**REMARKS**

Claims 1, 2 and 4-15 are pending in this application. By this Office Action, claims 1-13 are rejected under 35 U.S.C. §103. By this Amendment, claims 1, 2, 4, 9, 10 and 13 are amended to further clarify the subject matter being claimed, claim 3 has been canceled without prejudice, and claims 14 and 15 have been added. Support for the amendments to claims 1 and 13 may be found, for example, in original claim 3 and on page 3, second paragraph, of the present specification. Support for newly added claims 14 and 15 may be found, for example, on page 3, second paragraph, of the present specification. Thus, no new matter is added by the above amendments. In view of at least the following, reconsideration and allowance are respectfully requested.

**I. Rejections Under 35 U.S.C. §103**

The Office Action rejects claims 1-9, 12 and 13 under 35 U.S.C. §103(a) as allegedly being unpatentable over Drummond (U.S. Patent No. 2,768,993, hereinafter "Drummond") optionally in view of Hirose (U.S. Patent Application Publication No. 2001/0022149, hereinafter "Hirose") and/or Mitsuji et al. (U.S. Patent No. 5,130,167, hereinafter "Mitsuji"); rejects claims 10 and 11 under 35 U.S.C. §103(a) as allegedly being unpatentable over Drummond in view of Mitsuji and optionally further in view of Hirose; rejects claims 1-9, 12 and 13 under 35 U.S.C. §103(a) as allegedly being unpatentable over JP Publication No. 2002-035686 (hereinafter "the '686 publication") optionally in view of Hirose and/or Mitsuji; and rejects claims 10 and 11 under 35 U.S.C. §103(a) as allegedly being unpatentable over the '686 publication in view of Mitsuji and optionally further in view of Hirose.

Applicants respectfully traverse the rejections.

Without agreeing with or acquiescing to the rejections, Applicants note that claim 1 has been amended to recite "a rust inhibitor consisting essentially of: zinc flakes of a size ranging from 150 mesh up to 300 mesh; aluminum flakes of a size ranging from 150 mesh up

to 300 mesh; and a solution of modified silicone resin"; independent claims 13 and 15 also recite a rust inhibitor with the same composition. The claimed zinc and aluminum flakes allow the recited rust inhibitor to achieve an optimal "sacrificial anode effect" and effective surface coating (i.e., a "flaky zinc-aluminum binder layer" may be formed on the surface of an iron or steel structure), as described in paragraphs [0008] and [0009] of the present specification. Furthermore, the recited size range of zinc flakes and aluminum flakes enhances the aforementioned advantages of the claimed rust inhibitor (*see* paragraph [0009] of the present specification).

In contrast, Drummond discloses coating compositions for metal substrates comprising zinc powder and a resin binder. Drummond also teaches that aluminum can be used, and that the resin binder comprises an organic silicon compound, such as silicone and a suitable solvent (such as a volatile organic solvent). Although Drummond indicates that the "zinc metal particles are of relatively small size, preferably ultrafine particles and uniformly distributed throughout the silicone coating film," Drummond does not teach or suggest the use of zinc *flakes* or aluminum *flakes* (*see* Drummond, col. 3, lines 46-48). For at least this reason, Applicants submit that Drummond fails to disclose all the features of the rust inhibitor, recited in independent claims 1 and 13.

Furthermore, Drummond teaches that the "zinc metal powder preferably comprises particles of which approximately 80% passes a 300 inch, or finer, mesh sieve, the remainder passing at least 200 inch screen" (*see* Drummond, col. 4, lines 7-10). In contrast to the composition disclosed in Drummond, the recited rust inhibitor (in independent claims 1 and 13) includes no zinc flakes outside of the recited range of 150 mesh up to 300 mesh; furthermore, Applicants note that 300 mesh is not included in the recited size range. Drummond also fails to disclose aluminum flakes of the recited size range. Therefore, Drummond fails to teach yet another feature of the recited rust inhibitor of claims 1 and 13.

Drummond even *teaches away* from the composition of the recited rust inhibitor by suggesting a composition comprising 80% zinc metal powder that would pass through a 300 inch or finer mesh sieve, which falls outside of the recited size range of zinc flakes.

Hirose fails to cure the deficiencies of Drummond. Hirose teaches that "in the case of the zinc powder having flake form, the thickness is preferably less than 3  $\mu\text{m}$ , ... and the diameter is preferably less than 10  $\mu\text{m}$ ," which is outside of the recited size range of zinc flakes in independent claims 1 and 13 (*see* Hirose, paragraph [0017]). Applicants note that 300 mesh corresponds to a particle diameter of 85  $\mu\text{m}$ ; therefore, the range of particle diameters disclosed in Hirose corresponds to a size range greater than 300 mesh. Therefore, Hirose also fails to disclose a rust inhibitor comprising zinc flakes and aluminum flakes within the recited range of sizes. Furthermore, there is nothing in Mitsuji and the '686 publication that discloses zinc and aluminum flakes within the recited range of sizes.

For the reasons set forth above, Applicants submit that Drummond, Hirose, Mitsuji, and the '686 publication (either alone or in any combination) fail to disclose or to have rendered obvious all of the elements of the claimed rust inhibitor and the claimed method of inhibiting the formation of rust (recited in independent claims 1 and 13).

Therefore, the cited publications would not have rendered obvious claims 1, 2, and 4-13. Reconsideration and withdrawal of the rejections are respectfully requested.

## **II. New Claims**

For the reasons set forth above, Applicants submit that newly-added claims 14 and 15 recite allowable subject matter, and respectfully request that the Examiner indicate allowance of newly-added claims 14 and 15.

**III. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2, and 4-15 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

  
James A. Oliff  
Registration No. 27,075

Azza M. Jayaprakash  
Registration No. 55,299

JAO:AMJ/axl

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**OLIFF & BERRIDGE, PLC**  
**P.O. Box 320850**  
**Alexandria, Virginia 22320-4850**  
**Telephone: (703) 836-6400**

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